REMARKS

Status of the Claims

Claims 1 and 5-35 are pending and subject to restriction. Claims 12-14 and 29-31 are amended. Support for these amendments may be found throughout the application as originally filed. No new matter is added.

Restriction

The USPTO has restricted the claims into the following two groups:

Group I: Claims 1, 5-8, and 19-25, drawn to a method for identifying a protein, a method for identifying a nucleic acid and an isolated protein.

Group II: Claims 9-18 and 26-35, drawn to an isolated nucleic acid, a genetically modified plant cell and a genetically modified plant.

Election

Applicants hereby elect Group I, Claims 1, 5-8, and 19-25, drawn to a method for identifying a protein, a method for identifying a nucleic acid and an isolated protein **with traverse**. Applicants reserve the right to file divisional applications directed to the non-elected subject matter.

Traversal

The USPTO asserts that inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features. In particular, the Examiner contends that (i) Invention I requires method steps and materials not required by Invention II and does not relate to Invention II; (ii) Invention I does not require the plant transformation steps and materials of Invention II; (iii) Invention II requires plant transformation steps and materials not required by Invention I and because Invention II does not involve protein binding steps, it does not relate to Invention I. As such, the USPTO concludes that that Inventions I and II do not share a technical feature and thus lack unity of invention.[1]

Applicants respectfully traverse.

A. The USPTO's unity objection is not consistent with PCT Rules 13.1 and 13.2 and supporting PCT guidelines.

PCT Rules 13.1 and 13.2 recite:

13.1 Requirement

The international application shall relate to one invention only or to a group

[1] *See* Restriction Requirement, pages 2 and 3.

> of inventions so linked as to form a single general inventive concept ("requirement of unity of invention").
>
> 13.2 Circumstances in Which the Requirement of Unity of Invention Is to Be Considered Fulfilled
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> Where a group of inventions is claimed in one and the same international application, the requirement of unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.

Accordingly, under PCT Rules 13.1 and 13.2, there must be a technical relationship among the inventions (claims) in which the claims share a common or corresponding technical feature.

The USPTO contends that Groups I and II have technical features required by one of these groups, but not by the other group. As such, the USPTO's unity objection is based on features not common to the claims.

Applicants respectfully traverse and submit that the USPTO's rationale is inconsistent with the requirements of PCT Rule 13. Indeed, while unity of invention is clear if there is a common feature between the groups, a lack of unity does not exist simply when features in one claim are missing from other claims. For example, independent claims may include features not required in other independent claims and vice versa, but nonetheless have the same or corresponding special technical features, i.e., have unity of invention. This is supported in Chapter 10, paragraph 10.9 in the PCT International Search and Preliminary Examination Guidelines (PCT/GL/ISPE):[2] "***Alternative forms of an invention may be claimed*** either ***in a plurality of independent claims***, or in a single claim (but see paragraph 5.18)..." Accordingly, because the USPTO's unity objection is not consistent with PCT Rules 13.1 and 13.2, the lack of unity should be withdrawn.

B. The USPTO improperly objects to unity of invention by focusing on the dependent claims.

The USPTO asserts that claims 1, 6, and 23 (Group I) and claims 9 and 26 (Group II) lack unity.[3] Claim 9 depends from claim 6, which depends from claim 1. Claim 26 depends from claim 23.

Applicants respectfully traverse and submit that the USPTO's consideration of dependent claims 9 and 26 as the sole basis for finding a lack of unity is improper. Indeed, as discussed below,

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[2] *See* http://www.wipo.int/export/sites/www/pct/en/texts/pdf/ispe.pdf, pages 76-77.

[3] *See* Restriction Requirement, pages 2 and 3.

the PCT rules and supporting guidelines make clear that the independent claims—not the dependent claims—must be considered for unity of invention.

PCT Rule 13.4 recites:

> 13.4 *Dependent Claims*
>
> ***Subject to Rule 13.1, it shall be permitted to include*** in the same international application ***a reasonable number of dependent claims***, claiming specific forms of the invention claimed in an independent claim, ***even where the features of any dependent claim could be considered as constituting in themselves an invention.***

As a consequence from Rule 13.4, unity must first be considered for the independent claims. This is supported in Chapter 10, paragraph 10.6 in the PCT/GL/ISPE:[4]

> 10.06 ***Unity of invention has to be considered in the first place only in relation to the independent claims in an international application and not the dependent claims.*** By "dependent" claim is meant a claim which contains all the features of one or more other claims and contains a reference, preferably at the beginning, to the other claim or claims and then states the additional features claimed (Rule 6.4)...

Chapter 10, paragraph 10.7 in the PCT/GL/ISPE[5] further explains:

> 10.07 - ***If the independent claims avoid the prior art and satisfy the requirement of unity of invention, no problem of lack of unity arises in respect of any claims that depend on the independent claims. In particular, it does not matter if a dependent claim itself contains a further invention...***

According to Rule 13.4 and the supporting guidance of PCT/GL/ISPE, a unity objection must first be evaluated for the independent claims. The USPTO, however, has not made this evaluation. Rather, as discussed above, the USPTO contends that claims 9 and 26, which depend from independent claims 1 and 23, respectively, lack unity from the independent claims from which they depend. Even assuming the dependent claims (e.g., claims 9 and 26) constitute separate inventions, according to Rule 13.4 and the PCT/GL/ISPE, these claims are permitted to be included in the same application. Accordingly, because the USPTO has not properly evaluated unity of invention, Applicants respectfully request withdrawal of the lack of unity.

C. Groups I and II share special technical features.

Claim 1 (Group I) is directed to a method for identifying proteins having an elevated binding activity towards phosphorylated alpha-1,4-glucans compared to nonphosphorylated alpha-1,4-glucans. Claim 9 (Group II), which depends from claim 6 (Group I; depends from claim 1), is

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[4] *See* http://www.wipo.int/export/sites/www/pct/en/texts/pdf/ispe.pdf, page 76.

[5] *See id.*

directed to a nucleic acid molecule encoding a protein having this activity. The USPTO has not cited any art against claims 1, 6, or 9. Accordingly, claims 1, 6, and 9 (i.e., Groups I and II) share a special technical feature.

Likewise, claim 23 (Group I) is directed to a method for identifying a nucleic acid molecule coding for a protein which exhibits alpha-1,4-glucan phosphorylating enzymatic activity. Claim 26 (Group II), which depends from claim 23 (Group I), is directed to a nucleic acid molecule coding a protein having this activity. The USPTO has not cited any art against claims 23 or 26. Accordingly, claims 23 and 26 (i.e., Groups I and II) share a special technical feature.

Accordingly, because Groups I and II share a special technical feature, Applicants respectfully request withdrawal of the lack of unity objection.

D. The purported search burden is not an appropriate grounds for asserting a lack of unity.

The USPTO notes that the search for proteins and protein methods would be completely separate from a search for nucleic acids and transforming plants and expressing said nucleic acids and thus concludes that restriction is proper.[6]

Applicants respectfully traverse and submit that the USPTO's purported search burden is not a proper grounds for a lack of unity objection. Indeed, PCT/GL/ISPE Chapter 10, paragraph 10.5 recites:[7]

> 10.05 From the preceding paragraphs it is clear that the decision with respect to unity of invention rests with the International Searching Authority or the International Preliminary Examining Authority. However, the Authority should not raise objection of lack of unity of invention merely because the inventions claimed are classified in separate classification groups or merely for the purpose of restricting the international search to certain classification groups.

Accordingly, because search burden is not an appropriate grounds to object to unity of invention, Applicants respectfully request withdrawal of the lack of unity.

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[6] *See* Restriction Requirement, page 3.

[7] *See* http://www.wipo.int/export/sites/www/pct/en/texts/pdf/ispe.pdf, pages 75 and 76.

CONCLUSION

In view of the above remarks, early notification of a favorable consideration is respectfully requested. An indication of allowance of all claims is respectfully requested.

If the Examiner has any questions relating to this response, or the application in general, he is respectfully requested to contact the undersigned so that prosecution of this application may be expedited.

Respectfully submitted,

HUNTON & WILLIAMS

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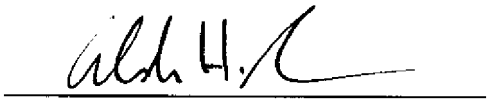
By: 

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